

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
9 October 2003 (09.10.2003)

PCT

(10) International Publication Number
WO 03/082306 A1

- (51) International Patent Classification⁷: **A61K 35/74**,
A61P 15/02, 1/00, 31/04
- (21) International Application Number: PCT/CA03/00443
- (22) International Filing Date: 28 March 2003 (28.03.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/368,169 28 March 2002 (28.03.2002) US
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- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**
— with international search report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: LACTOBACILLUS INERS FOR THE ENHANCEMENT OF UROGENITAL HEALTH

(57) Abstract: The present invention provides methods and compositions for administration of Lactobacillus iners alone or together with at least one other probiotic organism such as Bifodobacterium, or another Lactobacillus for reduction of the risk of urogenital infection and concomitant restoration and/or maintenance of a healthy urogenital flora. A method of treatment of vaginal infections is also contemplated.

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INTERNATIONAL SEARCH REPORT

Application No

PCT/CA 03/00443

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K35/74 A61P15/02 A61P1/00 A61P31/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, BIOSIS, MEDLINE, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	E. FALSEN ET AL.: "Phenotypic and phylogenetic characterization of a novel <i>Lactobacillus</i> species from human sources: description of <i>Lactobacillus iners</i> sp. nov." INTERNATIONAL JOURNAL OF SYSTEMATIC BACTERIOLOGY, vol. 49, no. 1, January 1999 (1999-01), pages 217-221, XP008019383 cited in the application page 217, left-hand column, bottom line page 221, left-hand column, line 27 - line 29	1-19
Y	WO 00 35465 A (UREX BIOTECH INC) 22 June 2000 (2000-06-22) page 11, line 21 - line 23; claims -/--	1-19



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents:

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

Z document member of the same patent family

Date of the actual completion of the international search

8 July 2003

Date of mailing of the international search report

17/07/2003

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INTERNATIONAL SEARCH REPORT

Patent Application No

PCT/CA 03/00443

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 93 09793 A (REID GREGOR ;WATT BRUCE ANDREW (CA)) 27 May 1993 (1993-05-27) claims	1-19
P, A	--- J.P. BURTON ET AL.: "Improved understanding of the bacterial vaginal microbiota of women before and after probiotic instillation." APPLIED AND ENVIRONMENTAL MICROBIOLOGY, vol. 69, no. 1, January 2003 (2003-01), pages 97-101, XP002246840 the whole document -----	1-19

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CA 03/00443

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 1-14, 17 and 18 (both as far as being dependent on claim 7) and 19 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

Patent Application No

PCT/CA 03/00443

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
WO 0035465	A	22-06-2000	AU	1543400 A		03-07-2000
			BR	9916062 A		24-09-2002
			CA	2354054 A1		22-06-2000
			WO	0035465 A2		22-06-2000
			EP	1137423 A2		04-10-2001
			PL	348973 A1		17-06-2002
			TR	200101699 T2		21-06-2002
			US	6479051 B1		12-11-2002
<hr/>						
WO 9309793	A	27-05-1993	GB	2261372 A		19-05-1993
			AT	218062 T		15-06-2002
			AU	2920592 A		15-06-1993
			CA	2123709 A1		27-05-1993
			WO	9309793 A1		27-05-1993
			DE	69232621 D1		04-07-2002
			DE	69232621 T2		13-02-2003
			DK	613374 T3		23-09-2002
			EP	0613374 A1		07-09-1994
			ES	2173872 T3		01-11-2002
			US	5645830 A		08-07-1997
			US	6004551 A		21-12-1999
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